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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,814	04/16/2004	Min-Hyo Lee	5000-1-578	8681
33942	7590	08/17/2007		
CHA & REITER, LLC 210 ROUTE 4 EAST STE 103 PARAMUS, NJ 07652			EXAMINER SEFCHECK, GREGORY B	
			ART UNIT	PAPER NUMBER
			2616	
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			08/17/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/825,814

Applicant(s)

LEE ET AL.

Examiner

Gregory B. Sefcheck

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers from prior foreign application 2003-52805, filed in the Republic of Korea on 7/30/2003, submitted under 35 U.S.C. 119(a)-(d) on 4/16/2004, which papers have been placed of record in the file.

### ***Drawings***

2. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

3. Claims 3 and 12 are objected to because of the following informalities:  
On line 2, "in" should be changed to - - is - - between "there" and "no".  
Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 4, 6, and 8-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Koch et al. (US 20040042446A1), hereafter Koch.

- Regarding Claims 1, 6, and 8-10,

Koch discloses a method of maintaining routing information in an Ethernet passive optical network that utilizes DHCP for assigning IP addresses to requesting nodes (Title; Abstract; Fig. 2; Pg. 3, paragraph 28; meets claim 1,10 – method for assigning IP addresses in an Ethernet passive optical network).

Referring to Fig. 2, Koch discloses PON interface 12 and DHCP server 36 (together constituting the claimed OLT) connected to several groupings (ONTs) 26A-M of network nodes 28 through PON interface modules (communication interfaces) 34A-M (claim 1,6,10 – network includes plurality of ONTs and OLT including a DHCP server; claim 6 – OLT comprising a communication interface to the ONTs).

Koch discloses IP address pools are established within a selected subnet scope corresponding to the respective node groupings 26 and PON interface modules 34 (Pg.

2, paragraph 23; Pg. 4, paragraph 44; claim 1,8,10 – establishing IP address pools including at least one IP address according to the ONTs).

Referring to Figs. 2-4, Koch discloses that a DHCP client of a node 28 requests an IP address, the request including a MAC address unique to the client (Pg. 3, paragraph 33). PON interface 12 performs MAC processing on the request to create a mapping to a PON interface module 34 and DHCP relay agent 38 on which the DHCP client resides (Pg. 3, paragraph 34; Pg. 4, paragraph 42; claim 1,6,10 – searching for an ONT from a MAC processing section of the OLT by means of a MAC address from which IP address assignment is requested when IP address assignment is requested from one of the ONTs, the ONT being connected to a DHCP client).

Koch shows that the request is forwarded on to the DHCP server 36, which responds with an assigned IP address retrieved from the pool of addresses within the appropriate subnet sent through the PON interface module 34 associated with the grouping 26 on which the client resides (Pg. 4, paragraphs 44-47; claim 1,9,10 - assigning an available IP address existing in an IP address pool established for the ONT having requested the IP address assignment according to ONTs).

- Regarding Claim 4,

Koch discloses a method and network meeting all limitations of the parent claim.

Koch discloses that the IP address pools are established within a common subnet scope corresponding to the groupings 26 of nodes 28 (Pg. 2, paragraph 23; Pg. 4, paragraph 44). Koch further discloses groupings 26 may includes 1-N nodes

servicing one or more clients, thereby requiring the IP address pool of a particular subnet/group be sufficient to accommodate the number of clients within the node grouping (Pg. 1, paragraph 8; Pg. 2, paragraph 20; meets claim 4 – establishing IP address pools according to a number of subscribers who will be assigned IP addresses).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koch in view of Barnard et al. (US 20030005097A1), hereafter Barnard.

- Regarding Claims 2 and 11,

Koch discloses a method and network meeting all limitations of the parent claim.

Koch does not explicitly disclose transmitting a response signal from the ONT having requested IP address assignment to the DHCP server when the ONT is assigned an IP address from the DHCP server.

Barnard discloses transmitting an address acknowledgement (response signal) from a requesting device to a DHCP server that has assigned an IP address to the requesting device (Fig. 9; Pg. 5, paragraph 47; meets claim 2,11 – transmitting a

response signal from the ONT having requested IP address assignment to the DHCP server when the ONT is assigned an IP address from the DHCP server).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Koch by transmitting a response signal from a requesting client through the corresponding ONT to the DHCP server when an IP address has been assigned, as shown by Barnard, thereby confirming the assignment and allowing notification of the assignment to other devices in the network.

8. Claims 3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koch in view of Sobel et al. (US007249187B2), hereafter Sobel.

- Regarding Claims 3 and 12,

Koch discloses a method and network meeting all limitations of the parent claim.

Koch does not explicitly disclose rejecting the IP address assignment request in the DHCP server when there is no available IP address in the IP address pool established for the ONT having request the IP address assignment.

Sobel discloses enforcement of compliance with network security protocols (Title). Sobel discloses that DHCP client requests for IP address assignment are rejected if there are no addresses available, and the client must repeat the requesting process at a later time (Col. 5, lines 37-50; meets claim 3,12 – rejecting the IP address assignment request in the DHCP server when there is no available IP address in the IP address pool established for the ONT having request the IP address assignment).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Koch by rejecting DHCP client requests when there is no available IP address, as shown by Sobel, thereby preventing network access to client devices when the network does not have the bandwidth to accommodate the client's communication.

9. Claims 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koch in view of Tams et al. (US006862286B1), hereafter Tams.

- Regarding Claims 5 and 7,

Koch discloses a method and network meeting all limitations of the parent claim.

Koch does not explicitly disclose allowing an operator to establish the IP address pools through an operator interface.

Tams discloses tracking dynamic addresses on a network in which a DHCP server manages a pool of IP addresses (Title; Col. 1, lines 35-36). Tams discloses a network manager (operator) establishes the pool of IP addresses that are managed by various DHCP servers and supplies that information to a network monitoring system (Col. 4, lines 15-30; meets claim 5,7 – allowing an operator to establish the IP address pools through an operator interface).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Koch by providing a network manager that manages the establishment of IP address pools in the DHCP servers of the network, as shown by



Art Unit: 2616

Tams. This would allow the network to track the assignment of IP addresses and current mappings to MAC addresses on the network, thereby optimizing the use of the available IP addresses.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Bahl (US 20060047791A1)
- Chen et al. (US 20030200321A1)
- Donahue et al. (US 20030101243A1)
- Kim (US 20020065806A1)
- Ray et al. (US006587455B1)
- Sistanizadeh et al. (US006452925B1)
- Beser (US006370147B1)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory B. Sefcheck whose telephone number is 571-272-3098. The examiner can normally be reached on Monday-Friday, 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on 571-272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Gregory Sercheck  
Patent Examiner  
8-14-2007